



Disc as Used to Produce Dreams of Desired Color.

Inducing Dreams of Pretty Faces

DREAMS MANUFACTURED

WHILE YOU WAIT

New Experiments Show
How Visions May Be
Influenced.

Hideous Faces May Be
Banished and Pretty
Ones Invited.

"Dream-Weighing" Ma-
chine a Most Ingen-
ious Device.

NERVE specialists have recently proven beyond doubt that pleasant as well as bad dreams can be readily made to order.

An experimenter who bandages his subjects' feet in splints which bend down their insteps until they are almost in line with the shin bone finds that dreams of dancing, walking or running on tip-toe are induced.

If hideous faces haunt your dreams, as is common, they may be replaced by pleasing ones if you will gaze with great concentration upon pictures of beautiful faces just before you settle down to slumber.

A course of experiments covering seven years has shown that dreams of certain colors may be induced by causing the subject to gaze steadily at disks or through glasses, of the desired hue, placed before the eyes in such a manner as will cause surprise, just before retiring.

That cold compresses applied to the head will prevent bad dreams is also noted. A layer of cotton wool bound over the forehead will, by increasing the temperature of the head, cause either pleasant or unpleasant dreams to become more vivid and intelligent.

By placing the sleeper on his right side his dreams are made absurd, extravagant and of a remote time; those experienced while he lies upon his left side are reasonable and of a recent time. Sleeping upon the back produces agitated dreams.

Bad dreams are dissipated also by placing a lighted candle in the otherwise darkened room of the sleeper.

Hot Water Applications.

A hot-water bottle placed at the feet of the sleeping subject caused him to dream that he was walking over hot lava, while to another it conjured up the dream-picture that he was being led by Satan over the flaming marl of hell. Another so treated dreamed that some Mexicans were holding his feet to a flame to make him confess the secrets of alchemy. A woman subject of the same experiment dreamed that she was a bear being taught to dance over hot iron plates.

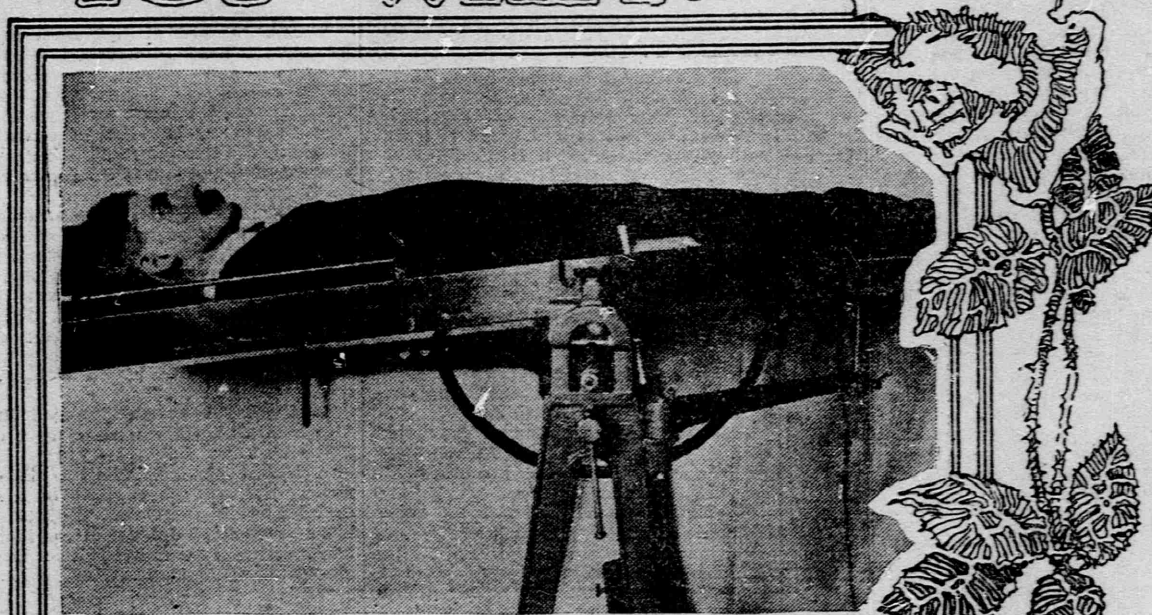
Applying to the feet a cloth saturated with ice water will usually induce a dream of walking over snow or ice in the bare feet. Uncovering the sleeper's feet and legs to the atmosphere of a cold room will usually induce the dream that he is walking somewhere dressed in his nether garments—a dream which occurs to us often and which is accompanied by a sense of deep embarrassment, for we usually picture ourselves in a public place, gazed upon by astonished multitudes. And when we awake we find that we have kicked off the covers.

Dreams of flying through the air are induced by admitting a strong draft of air to the room of the sleeper and allowing it to blow over his bed. Ticking the sleeper with a horsehair or a straw will usually induce dreams of insects, which often assume marvellous proportions and hideous forms. The sharp banging of a door often suggests a dream in which the report of a gun or a pistol is heard. Shadows flitting about the room are believed to supply much food for dreaming.

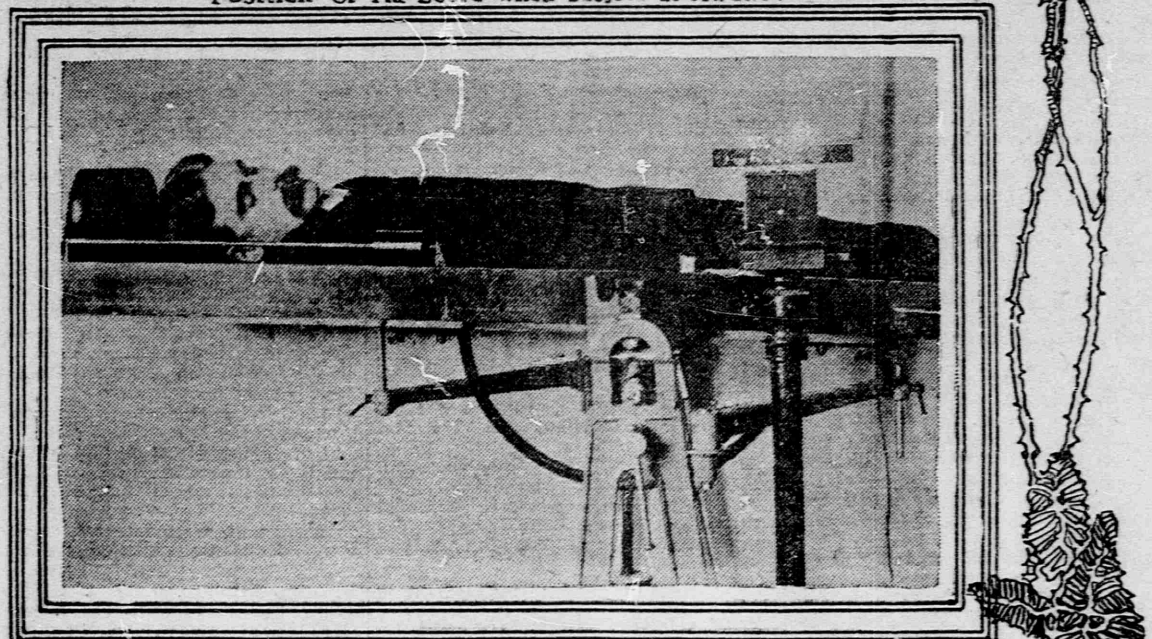
Ear Sensitive During Sleep.

In our dreams we see more than we hear. During a dream storm we often see the lightning, but seldom hear the thunder. While dreaming we further more hear more than we feel, feel more than we taste, and taste more than we smell. It has been demonstrated that the ear is more sensitive during sleep than in waking moments. It receives innumerable molecular vibrations otherwise imperceptible.

Odors perceived during sleep also form food for dreaming. A physician required to spend the night at the ill-smelling place of a chesemonger dreamed that he was sealed up in an immense hollow cheese, where an army of rats were running over his naked body.



Position of Tilt Board When Subject is Awake.

Tilt Board for Measuring
Dreams, and Alouette for
Inducing Sleep

Tastes exert a similar agency. Former Surgeon General Hammond, U. S. A., told the story of a young woman who put aloes on her thumb to cure her baby habit of sucking that member. She dreamed that she walked the ocean in a vessel of wormwood and that she tasted its bitterness whenever eating or drinking. Her dream took her to England, where a physician treated her with ox gall, and to Rome, where the Pope ordered her to eat a piece of Lot's wife turned to salt, from whom she broke a thumb, which she placed in her mouth. When she awoke she was sucking her own thumb and all of the aloes had disappeared.

A neurologist applies in his dream studies an ophthalmoscope—the glass commonly used by oculists to examine the inner workings of the eye. He has discovered that much of the real food for dreams is contributed by opaque particles upon the eye, and that these in the waking state appear projected into space as pots, lines, drops, and twisted bodies.

Seeing Snakes.

The dreaming eye actually sees, although the sleeping room be pitch dark. Protoplasm in every cell of the body contains phosphorus. The eye-lid is to a certain extent luminous and in the dark serves as a screen against which foreign substances in the eye are seen. Twisting blood vessels and their corpuscles are similarly shadowed. All of these objects appear to be five or six feet away. Their dark shadows are believed by this specialist to suggest the objects which set the dream mechanism in motion. The changing blood pressure through the retina is found to produce various colors.

Why drunkards "see snakes" was lately learned by aid of the ophthalmoscope applied to alcoholics. During delirium tremens and other advanced stages of alcoholism the blood vessels of the retina enlarge and are black with congested blood. Their movements projected upon the field of dream vision appear exactly like the twisting and squirming of serpents.

In the dreaming state the mind is found to work backward. Effect suggests cause whereas to the waking consciousness cause suggests effect. A breeze blowing over us produces an effect which, when we are asleep, sug-

Treatment to
Prevent Nightmare

gests as a probable cause that we are flying through the air. But the dreaming brain, like the savage brain, has but feeble appreciation of the logical relation of cause and effect. Simple resemblances of form, color, sound, etc., will bring together dream images without any sensible relationship. Bad dreams are sometimes so vivid as to drive men to permanent insanity. Cowper's madness is said to have been due to this cause.

Dream Ghosts.

Association plays an important part in our dreams. A man who while living dreamed where a peculiar perfume was commonly used invariably dreamed of that place when this perfume was dropped upon his pillow during sleep.

We often retain our dream images for some seconds after awakening. They are discovered to remain as long as the position of the eye continues unchanged. This phenomenon is offered as an explanation for many ghosts claimed to

be seen immediately after slumber, before the dream itself is yet remembered. The majority of our dreams are not remembered until after we rise in the morning. Dreams become more and more infrequent as we grow older. Infants appear to begin dreaming a few days after birth, when notions of their lips and changes of their facial expression during sleep are noticeable. The dreams of the aged are usually scenes of younger days portrayed to them in the present.

Statistics show that our most vivid dreaming is after 4 a. m. The deeper the sleep the less we participate in our own dreams. We never see our own faces in our dream pictures.

Uncultured people seldom dream, and when they do their visions are usually limited to crude repetitions of experience of the previous day or week. Idiots and imbeciles are poor dreamers. The same is true of criminals, and no sleep appears to be so like the proverbial

"sleep of the just" as is that of the usual murderer. If we are to believe the modern criminologists. Even during the night following his crime he is not apt to be haunted by troublesome visions. So, then, the best dreamers seem to be the best thinkers. Absence of dreams is said by some to be a premonitory symptom of nervous disease.

Women Dream More Than Men.

Women dream more than do men of their own age, according to the statisticians; spinsters more than their married sisters.

The memory of the sleeping brain is often more acute than that of the waking. A man once confided to his son, a small child, where he had deposited his will. The son grew to middle age before his father's death. The will had been forgotten, and after worrying for weeks over the settlement of the estate the son dreamed one night that he saw his father hiding the much-sought testament. Next morning he searched the place revealed in the dream and found the will there. He was sure that his

father's spirit had visited him in the night. But later events proved to him that he but remembered an actual occurrence of his boyhood.

Dreams are caused by small quantities of blood left in the vessels of the brain. Sleep results from a draining of the blood in the brain, as has been proven by a series of experiments in which the skulls of dogs were trephined, the extracted buttons of bone being replaced by watch crystals. Through these disks of glass it was noticed that when the animals fell asleep their brains, previously red, would turn pale and collapse. At the instant of awakening the blood returned. A touch, sound, or other stimulus to the senses during sleep would cause the brain to grow larger and become more saturated with blood. Insomnia results from any overstrain of mind or body which dilates the blood vessels of the brain.

"Weighing" Dreams.

An instrument which demonstrates the relationship between dreams and brain circulation is known as the "tilt-

board." A long tray, about the length and width of a coffin, but more shallow, is occupied by a man lying supine. He is so arranged that during his waking state the tray balances exactly upon a knife blade. He is then put to sleep with the aid of an "alouette"—or hypnotic mirror. As sleep gradually overpowers him the half of this scientific seasaw containing his head gently rises, and when deep sleep has set in the end, containing his feet drops upon a rest, provided. When dreams are induced by any of the experimental methods described herein, the end of the tray containing the sleeping brain will descend to a depth proportionate to the dream's vividness.

The explanation of the experiment is very simple. As the brain is drained of blood for sleep the head becomes lighter and that end of the balance rises. As small quantities of the blood return to supply the fitting dreams it falls slightly. Thus may our dreams be actually weighed.

JOHN ELFRETH WATKINS.

MANKIND AND THE WIDOW

"TELL me how a country treats its widows and I will tell you how civilized it is."

So declares Charles Letourneau, general secretary of the Anthropological Society of Paris, who asserts that one of the signs of the world's progress is the improvement in the condition of widows.

This indication of the social evolution is a hobby of the famous anthropologist, who has just published the result of his researches.

Widowhood, the French savant declares, is a necessary adjunct to civilization and the treatment of bereaved women a comparative though not an absolute test of enlightenment. To begin with, widowhood does not and cannot exist in anarchic societies. Some kind of marriage is a condition precedent. It may not be much of a ceremony, to be sure; it may consist in the bridegroom either purchasing or capturing his bride, but even this is a crude aspiration to social order, a recognition of customs and laws, and is a step ahead of the promiscuity practiced by the Australian Kamilaroi.

M. Letourneau discusses the status of the widow in all lands and under every condition and the result of his researches is enough to convince anyone, he thinks, that in most environments the widowhood of her lord is an object of commiseration, and this holds true whether that lord is an indulgent paymaster to her milliner and dressmaker or a cruel taskmaster who drives her to the fields.

Customs in Darkest Africa.

In many savage tribes the condition of the widow is regulated in a simple and, for herself, a sad way. The woman, who has usually been captured or bought, is emancipated when the husband dies. She is an ass, belonging to the heir at law. Frequently additional and painful duties are imposed upon her. For instance, the Hottentot woman who has been so unfortunate as to survive her master must cut off a finger joint.

In equatorial Africa a son inherits the wives of his father, but possesses no special duties to any of them. Being himself young and having an eye to ebony loveliness, he treats his inherited harem as an asset simply, and throws it upon the market. If his father happen to have been a man of quality the women bring good prices, no matter how old or wrinkled, for it is esteemed by the "common people" a great honor to succeed to the marital privileges of a chief.

But it is not so easy in primitive society to dispose of just the ordinary commonplace widow, and to this fact, M. Letourneau says, is due the uxorial sacrifices made upon the tombs of departed spouses. Not caring to be incumbered with unattached women, so-called simply has a prescribed way of disposing of them. This is sometimes a religious ceremonial and sometimes it is not, but it is prevalent in communities wide apart. In certain parts of New Zealand to this day the widow is strangled at the obsequies.

Massacre Follows King's Death.

When the king of Dahomey dies a general massacre follows, his widows playing an important part as victims. Strange as it may appear today, the same custom prevailed in primitive Germany. Savages in all countries, to whatever race they belong, resemble each other and repeat themselves.

Among various people funeral sacri-

fices are replaced by mutilations, more or less voluntary. Polynesian women cut gashes on their faces and bodies to show their grief, and yet it is no uncommon sight at Noukahiva to see a creature thus branded with the marks of recent bereavement making merry with foreign sailors.

It is a fact that can not be gainsaid, according to this writer, that practically all laws, whether spread upon the statute books of advanced peoples or handed down by traditions and customs among the heathen—all laws governing domestic relations give the male person a decided advantage. One reason for this no doubt lies in the fact that the male person, under almost every government, makes the laws.

In many of the redskin tribes of North America second marriages are not tolerated until after a long delay, but even where such regulations exist the widower may remarry much sooner than the widow. There are exceptions. Among the Omaha Indians the husband may not remarry until after a season of mourning extending over a period of seven years unless he buy his freedom from the dead wife's people. The price of such release is usually a pony.

Akin to Levirate.

The natives of the Himalayan Bhootan are sometimes monogamous, sometimes polygamous, and these variations naturally affect widowhood. Among the monogamous and polygamous the widow may marry only after a delay of three years. Of course, in the polyandrous household there can hardly be such a thing as widowhood. Generally speaking, however, in such a state of society the woman marries brothers, but if she do not, then upon the death of one of her husbands his eldest brother succeeds to his share of the wife and the marital rights. This custom, though less refined, is akin to the old Jewish levirate, which commanded a man to marry his brother's widow. And under the law the first issue of such marriage was considered the son and heir of the brother.

With the passing of the Hebrew commonwealth the levirate, being no longer compulsory, fell into disuse; at the same time it is an interesting fact, which M. Letourneau points out, that the custom is widely spread even unto this day, especially among peoples whose code is a crude jumble of traditions. In Melanesia, New Caledonia, the brother-in-law, whether already married or not, must take the widow to wife. It was also practiced, and is yet to a limited extent, among the aborigines of the Western Hemisphere, especially the Chippewas in Nicaragua the widow of an Indian belongs to the brother, or, if there be no brother, to the nearest male relative.

The Code of Manu.

The code of Manu, going a step farther, imposes the levirate duty even upon the brother of a betrothed man who dies. This is far from shocking to even the modern civilized sense. The Prince of Wales had an elder brother who was betrothed to his present wife, then Princess of Teck. The elder brother died, and it is scarcely going too far to say that public opinion in England demanded that the prince to the present king espouse his brother's fiancée. All this happened less than fifteen years ago.

Sacrificed on Husband's Pyre.

India is not altogether a barbarous country, yet every well-informed person knows of the sacrificing of woman upon the funeral pyre of her husband. With comparatively recent times this has

been practiced with great pomp and ceremony. In the year 1890 all the wives of Prince Morava, forty-seven in number, were burnt with his corpse.

The servitude of a Chinese woman is so extreme that she owes allegiance first to her parents, then to her husband, and next to her son. She remarries or is sold without being consulted at all.

From the fusion of Chinese doctrines with the gross customs of more or less barbarous European races there resulted for the widow a position of subjection. Among the Germans she became the property of her own family and could be recd. like any other chattel. Strangely enough, the price of a widow was just double that paid by her first purchaser.

M. Letourneau concludes from his researches that the fate of the widow has varied with the matrimonial forms in use, and according to the degree of civilization, but that it has not always been ameliorated in proportion to the general progress; that laws and customs have ever been kind to the widower, and that the condition of the woman was better even in certain primitive societies than it became later.

Traces of ancestral iniquities are preserved in the modern codes which, though nearly emancipating the widow, push the fanaticism of consanguinity so far as not to consider her the relative of her husband as concerns property. From a social point of view, he declares, the whole of his survey of the treatment of widows is not flattering to humanity. "In short, the easy resignation with which men and women bear widowhood places mankind, as regards nobility of sentiment, far below certain species of animals, as, for example, the Illinois parakeet, for whom widowhood and death are synonymous, as well for the male as for the female."

GREAT LITTLE MEN.

The question has often been asked whether the size of men had anything to do with genius, and the answer has often been made in the affirmative. It is asserted that the greatest men who ever lived have been under the average height, and it is recalled that many men of wonderful intellectual capacity have been cripples, or in some way physically deficient.

Gustavus Adolphus was the only one of the six great captains of the world who was a large man. Alexander was small like Napoleon. Hannibal, Caesar, and Frederick were under the medium size. So also were Louis XI, Richelieu and Talleyrand.

Peppin, who laid the cornerstone of the French nation, although possessed of extraordinary powers, was bandy-legged and almost a dwarf.

Napoleon, perhaps the greatest general and statesman of the Byzantine empire, was a physical weakling and all but a wretch.

Count de Gages, one of the most illustrious of the Spanish generals, was a hunchback, likewise De la Galle, one of France's ablest admirals.

Nelson, England's first admiral among her many extraordinary sea chiefs, and Napier, conqueror of Scinde, were small and to the eye extremely delicate men. Grand, glorious, good St. Paul, first of all men, properly speaking, was short, and, according to tradition, not winning in personal appearance.

Louis, the most imposing figure on the throne of France, had to resort to high-heeled shoes, a lofty wig, and a general make-up to render himself conspicuous.

England's greatest actor, Keane, was a little man; also the Booths and Gar-